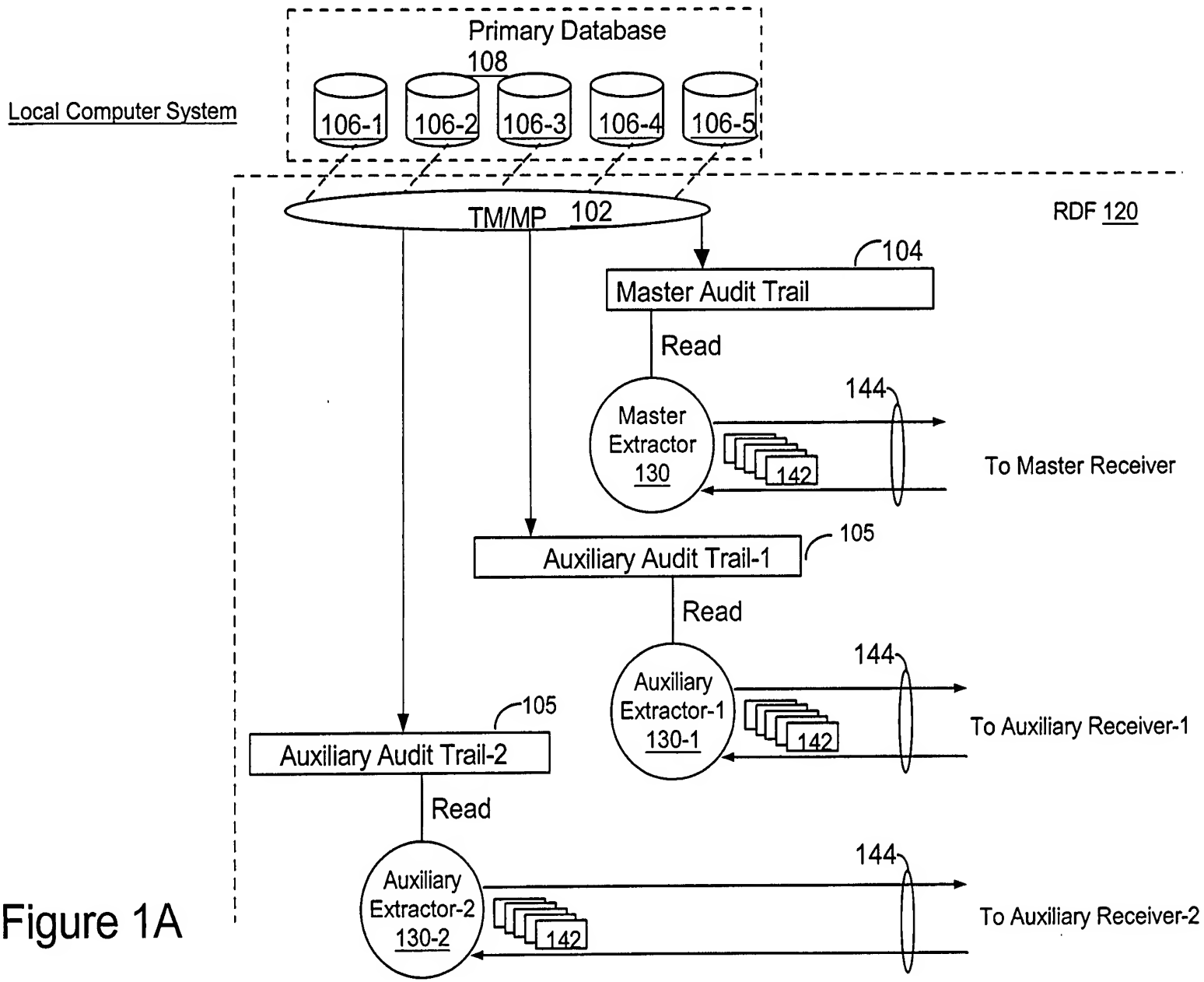

Local Computer System
Primary Database
108
106-1
106-2
106-3
106-4
106-5
TM/MP 102
RDF 120
104
Master Audit Trail
Read
144
Master
Extractor
130
142
To Master Receiver
105
Auxiliary Audit Trail-1
Read
144
Auxiliary
Extractor-1
130-1
142
To Auxiliary Receiver-1
105
Auxiliary Audit Trail-2
Read
144
Auxiliary
Extractor-2
130-2
142
To Auxiliary Receiver-2

Figure 1A

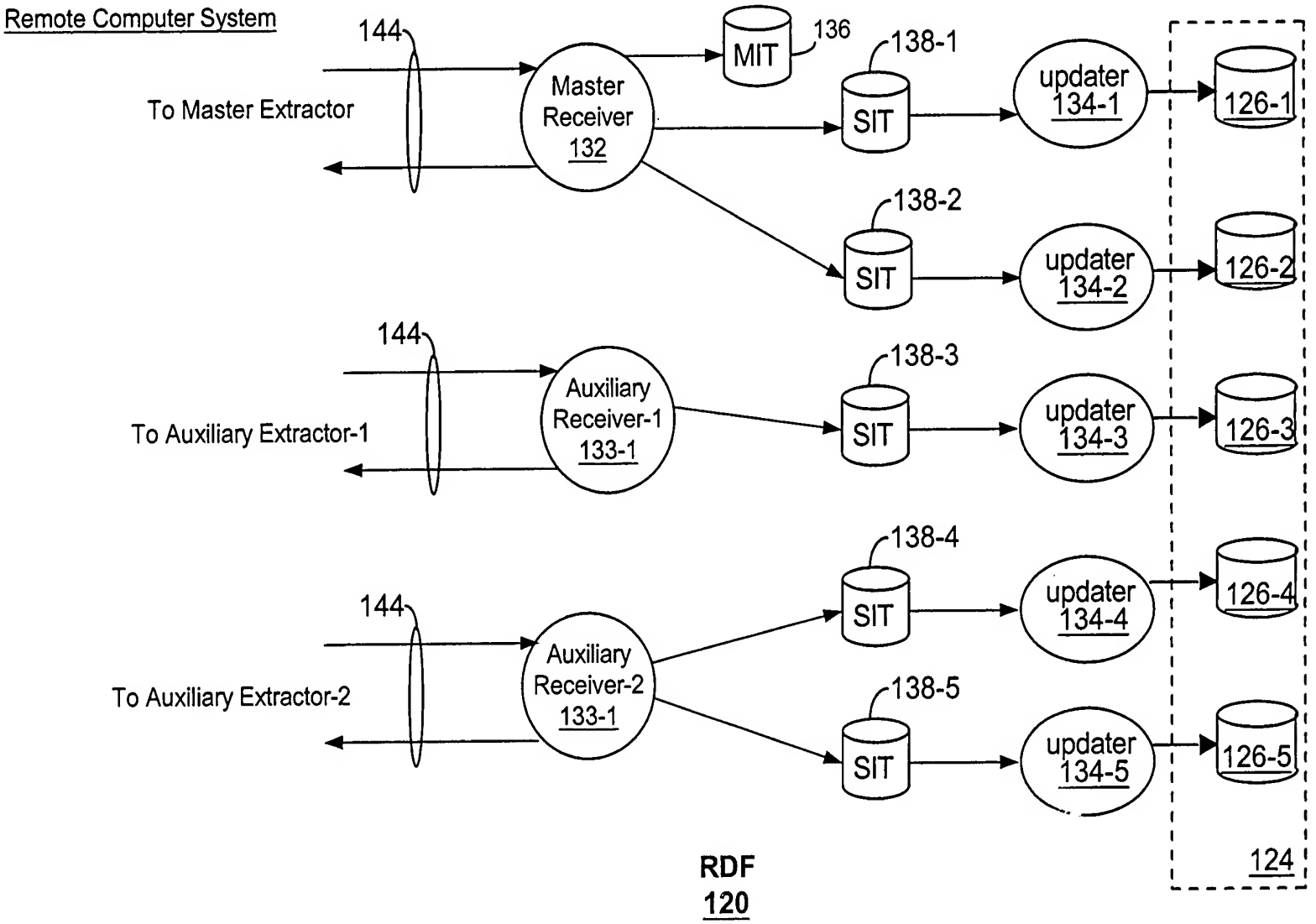

Remote Computer System
144
To Master Extractor
Master Receiver 132
MIT
136
138-1
SIT
updater 134-1
126-1
138-2
SIT
updater 134-2
126-2
144
To Auxiliary Extractor-1
Auxiliary Receiver-1 133-1
138-3
SIT
updater 134-3
126-3
138-4
SIT
updater 134-4
126-4
144
To Auxiliary Extractor-2
Auxiliary Receiver-2 133-1
138-5
SIT
updater 134-5
126-5
124
RDF
120

Figure 1B

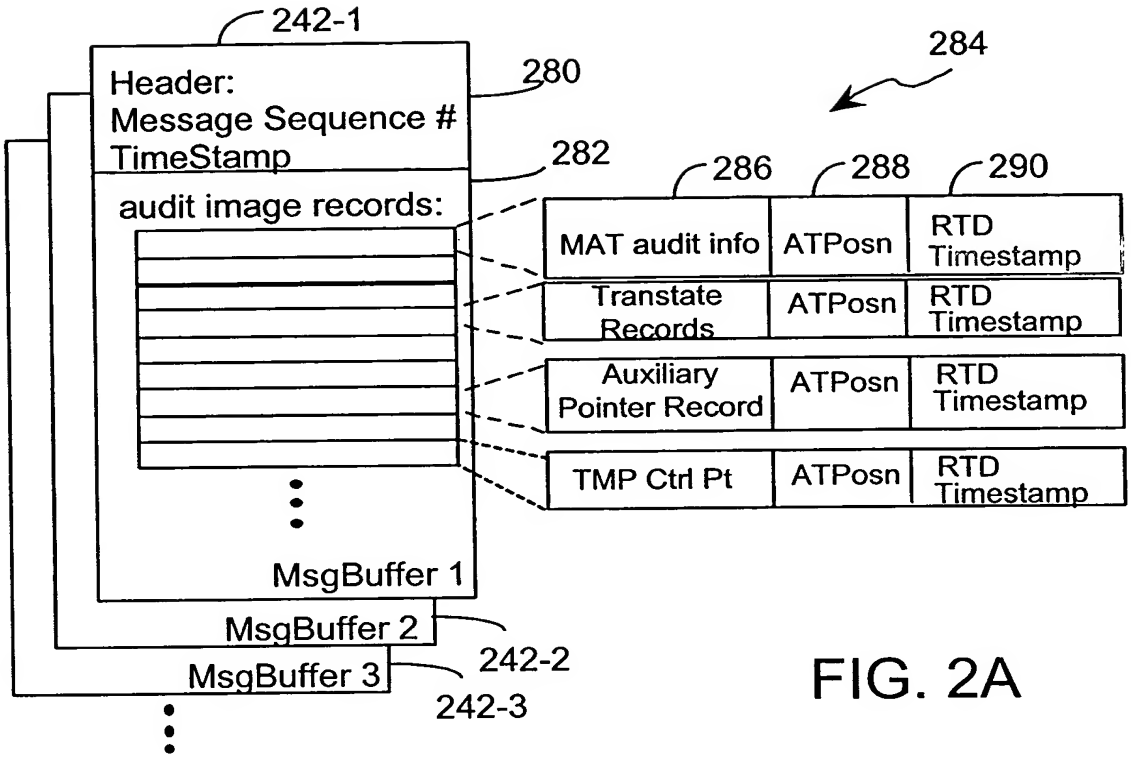

242-1
Header:
Message Sequence #
TimeStamp
280
284
282
286
288
290
audit image records:
MAT audit info
ATPosn
RTD Timestamp
Transtate Records
ATPosn
RTD Timestamp
Auxiliary Pointer Record
ATPosn
RTD Timestamp
TMP Ctrl Pt
ATPosn
RTD Timestamp
MsgBuffer 1
MsgBuffer 2
242-2
MsgBuffer 3
242-3

FIG. 2A

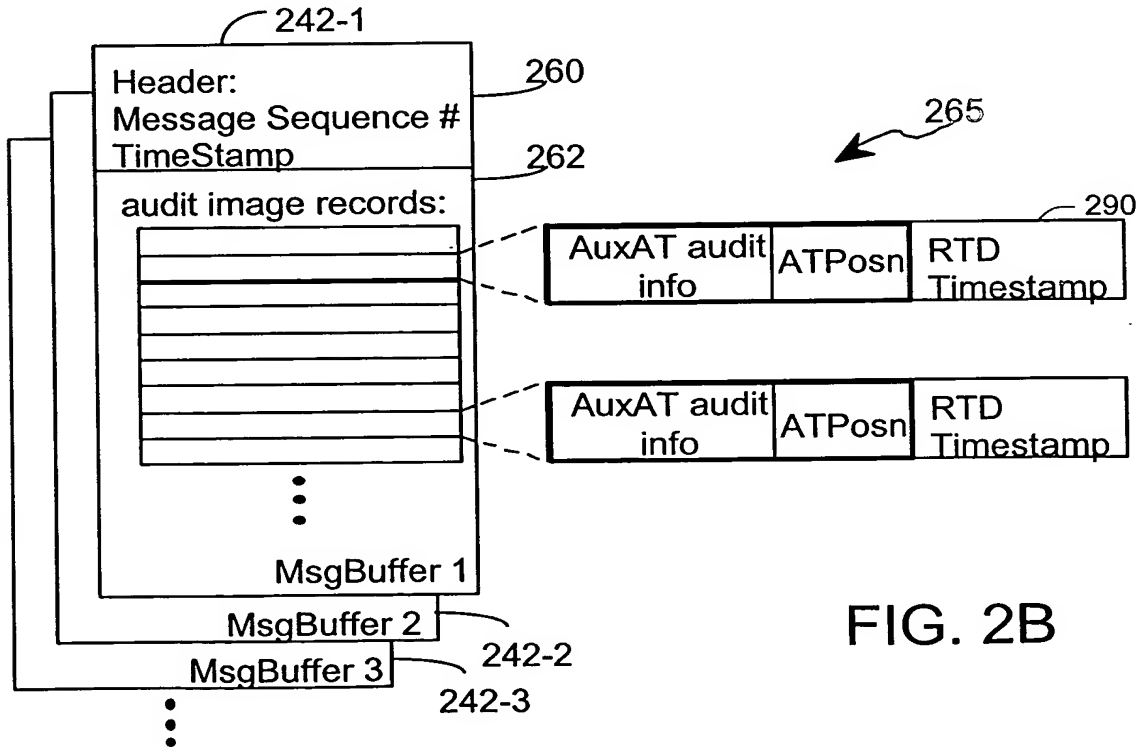

242-1
Header:
Message Sequence #
TimeStamp
260
265
262
290
audit image records:
AuxAT audit info
ATPosn
RTD Timestamp
AuxAT audit info
ATPosn
RTD Timestamp
MsgBuffer 1
MsgBuffer 2
242-2
MsgBuffer 3
242-3

FIG. 2B

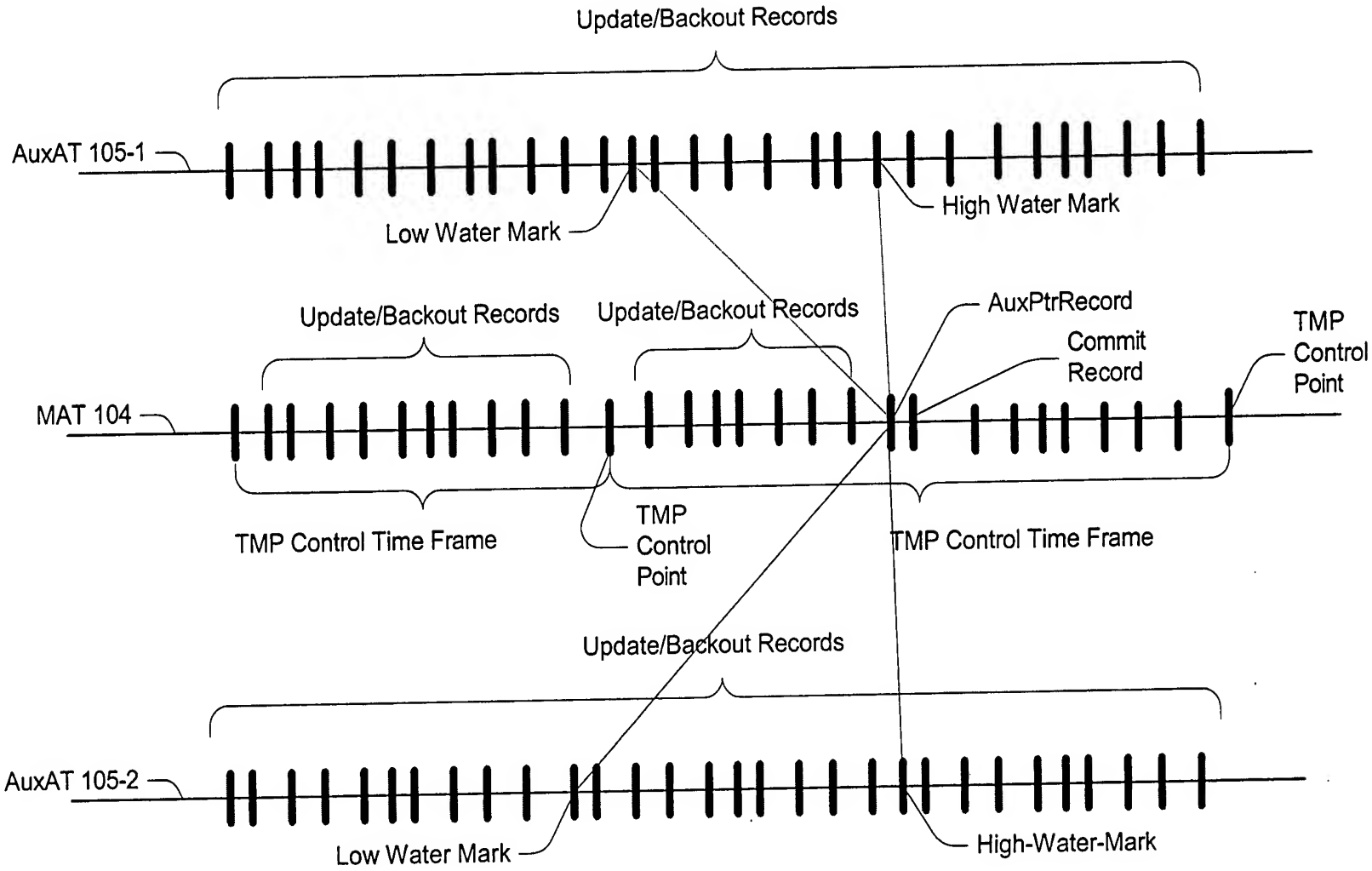

Update/Backout Records
AuxAT 105-1
Low Water Mark
High Water Mark
Update/Backout Records
Update/Backout Records
AuxPtrRecord
Commit Record
TMP Control Point
MAT 104
TMP Control Time Frame
TMP Control Point
TMP Control Time Frame
Update/Backout Records
AuxAT 105-2
Low Water Mark
High-Water-Mark

Figure 3

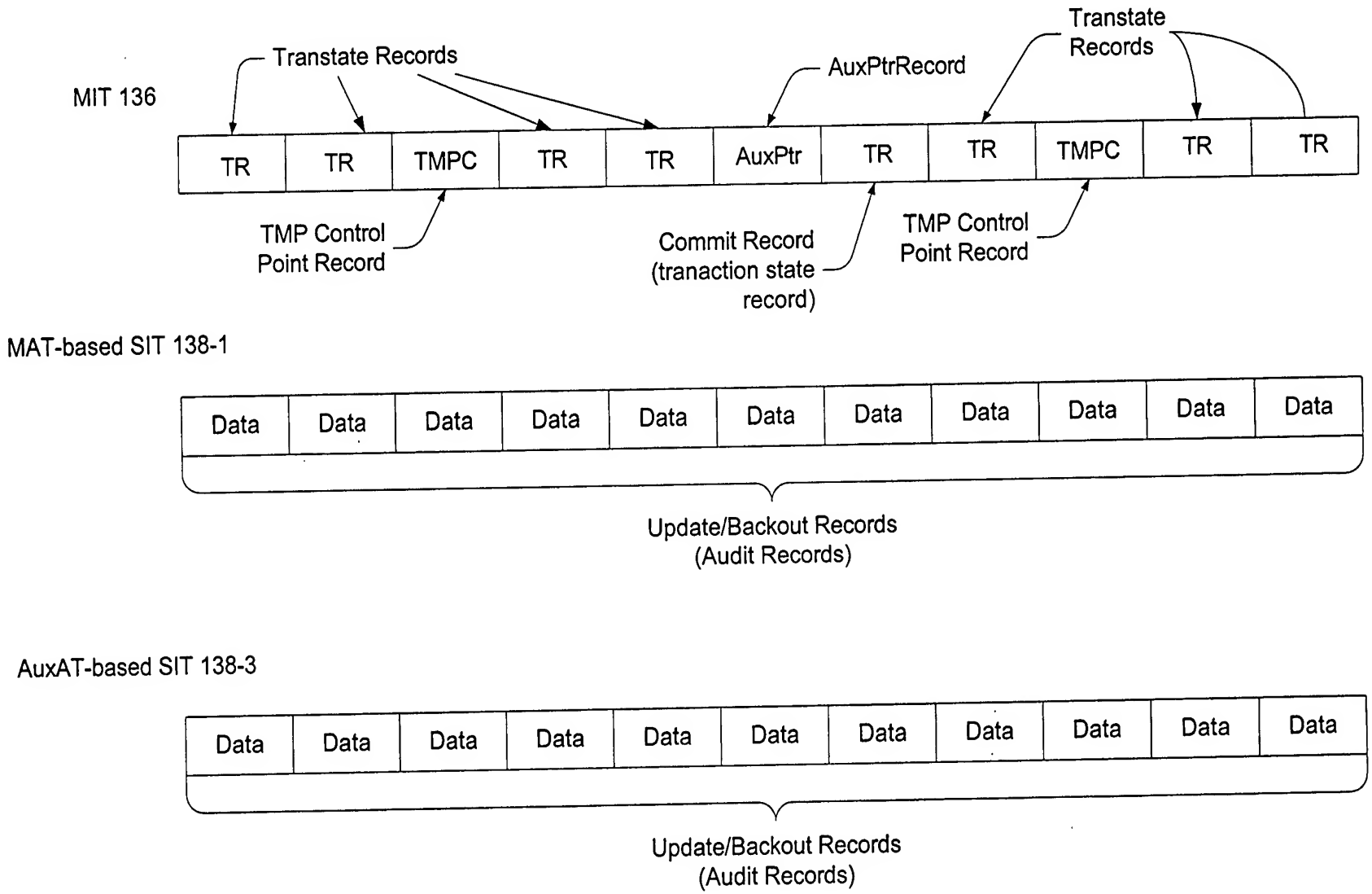
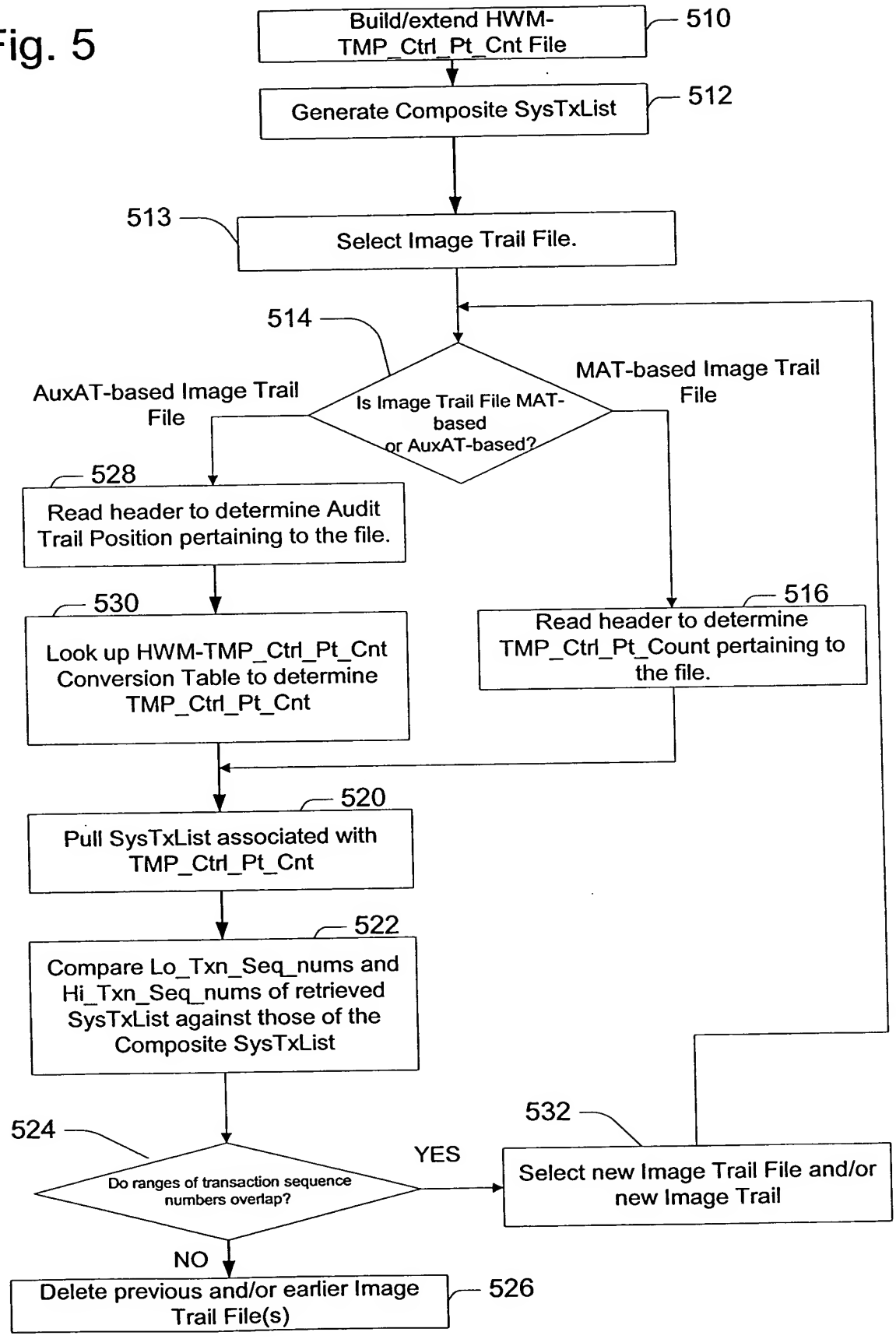

MIT 136
Transtate Records
AuxPtrRecord
Transtate Records
TR
TR
TMPC
TR
TR
AuxPtr
TR
TR
TMPC
TR
TR
TMP Control Point Record
Commit Record (tranaction state record)
TMP Control Point Record
MAT-based SIT 138-1
Data
Update/Backout Records (Audit Records)
AuxAT-based SIT 138-3
Data
Update/Backout Records (Audit Records)

Figure 4

Fig. 5


Build/extend HWM-TMP_Ctrl_Pt_Cnt File
510
Generate Composite SysTxList
512
513
Select Image Trail File.
514
Is Image Trail File MAT-based or AuxAT-based?
AuxAT-based Image Trail File
MAT-based Image Trail File
528
Read header to determine Audit Trail Position pertaining to the file.
530
Look up HWM-TMP_Ctrl_Pt_Cnt Conversion Table to determine TMP_Ctrl_Pt_Cnt
516
Read header to determine TMP_Ctrl_Pt_Count pertaining to the file.
520
Pull SysTxList associated with TMP_Ctrl_Pt_Cnt
522
Compare Lo_Txn_Seq_nums and Hi_Txn_Seq_nums of retrieved SysTxList against those of the Composite SysTxList
524
Do ranges of transaction sequence numbers overlap?
YES
532
Select new Image Trail File and/or new Image Trail
NO
Delete previous and/or earlier Image Trail File(s)
526

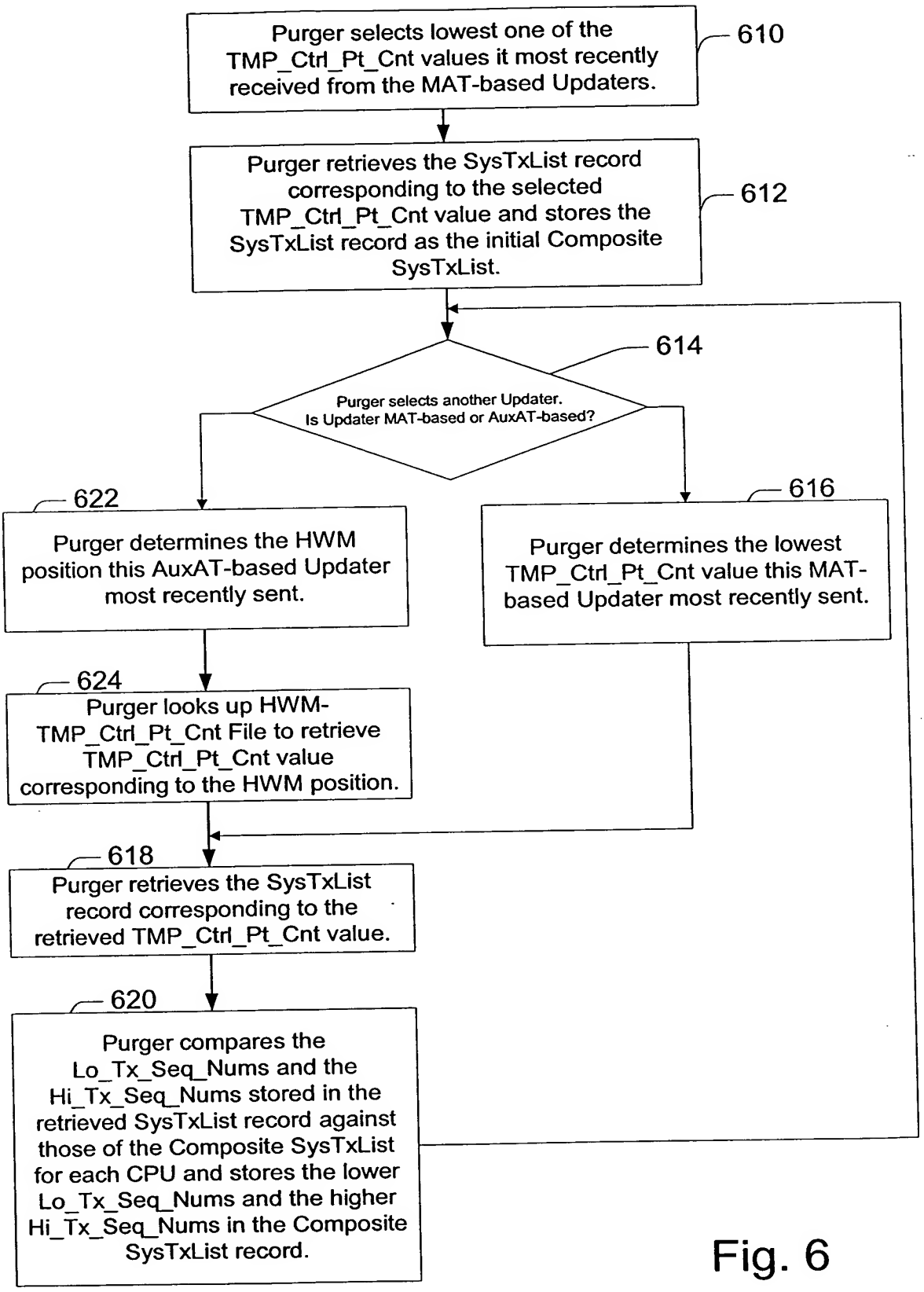

Purger selects lowest one of the TMP_Ctrl_Pt_Cnt values it most recently received from the MAT-based Updaters.
610
Purger retrieves the SysTxList record corresponding to the selected TMP_Ctrl_Pt_Cnt value and stores the SysTxList record as the initial Composite SysTxList.
612
614
Purger selects another Updater. Is Updater MAT-based or AuxAT-based?
622
Purger determines the HWM position this AuxAT-based Updater most recently sent.
616
Purger determines the lowest TMP_Ctrl_Pt_Cnt value this MAT-based Updater most recently sent.
624
Purger looks up HWM-TMP_Ctrl_Pt_Cnt File to retrieve TMP_Ctrl_Pt_Cnt value corresponding to the HWM position.
618
Purger retrieves the SysTxList record corresponding to the retrieved TMP_Ctrl_Pt_Cnt value.
620
Purger compares the Lo_Tx_Seq_Nums and the Hi_Tx_Seq_Nums stored in the retrieved SysTxList record against those of the Composite SysTxList for each CPU and stores the lower Lo_Tx_Seq_Nums and the higher Hi_Tx_Seq_Nums in the Composite SysTxList record.

Fig. 6

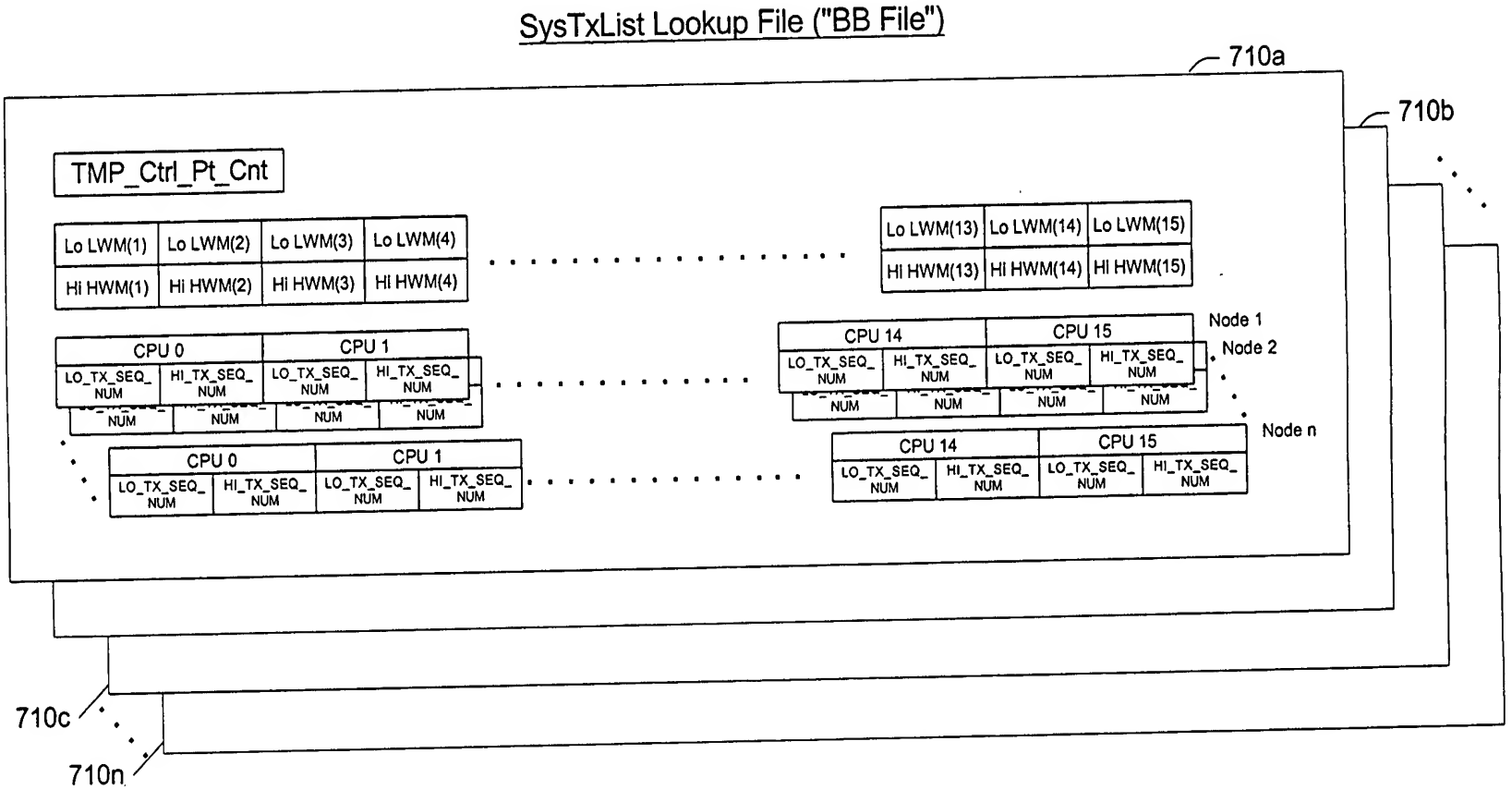

SysTxList Lookup File ("BB File")
710a
710b
TMP_Ctrl_Pt_Cnt
Lo LWM(1)
Lo LWM(2)
Lo LWM(3)
Lo LWM(4)
Hi HWM(1)
Hi HWM(2)
Hi HWM(3)
Hi HWM(4)
Lo LWM(13)
Lo LWM(14)
Lo LWM(15)
Hi HWM(13)
Hi HWM(14)
Hi HWM(15)
CPU 0
CPU 1
CPU 14
CPU 15
LO_TX_SEQ_NUM
HI_TX_SEQ_NUM
Node 1
Node 2
Node n
710c
710n

Fig. 7

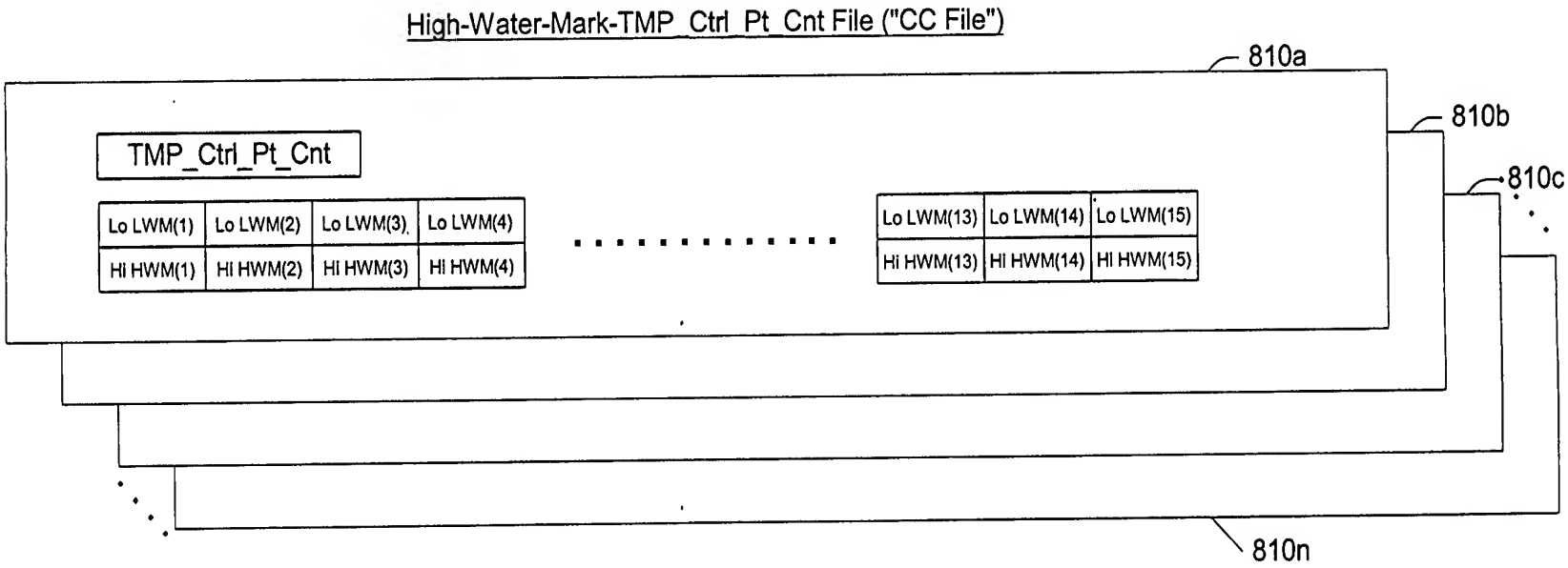

High-Water-Mark-TMP_Ctrl_Pt_Cnt File ("CC File")
810a
810b
810c
810n
TMP_Ctrl_Pt_Cnt
Lo LWM(1)
Lo LWM(2)
Lo LWM(3)
Lo LWM(4)
Hi HWM(1)
Hi HWM(2)
Hi HWM(3)
Hi HWM(4)
Lo LWM(13)
Lo LWM(14)
Lo LWM(15)
Hi HWM(13)
Hi HWM(14)
Hi HWM(15)

Fig. 8

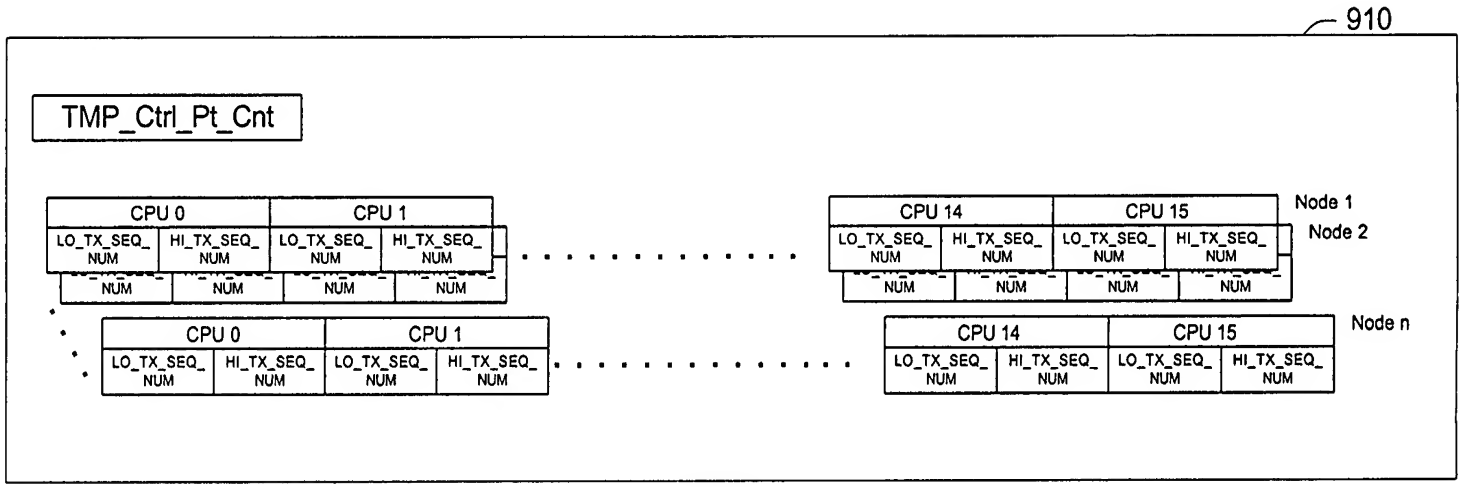

Composite SysTxList
910
TMP_Ctrl_Pt_Cnt
CPU 0
CPU 1
CPU 14
CPU 15
LO_TX_SEQ_ NUM
HI_TX_SEQ_ NUM
Node 1
Node 2
Node n

Fig. 9